

## **ABSTRACT**

1 A method is discussed of obtaining a parameter of interest of an earth formation,  
2 typically a formation resistivity or a distance to a bed boundary, in conditions where an  
3 induction tool is using having a body with finite, non-zero conductivity. The method  
4 substantially removes the effects of the conductivity of the tool from the signal received  
5 from the earth formation. A Taylor series expansion in one half of odd integer powers of  
6 time is used to represent the received signal. At least one leading term of the Taylor  
7 series expansion can be subtracted from the second signal. A filtering operation is  
8 applied to the second signal to remove the terms most dominated by pipe effects. Typical  
9 filtering operations can be a differential filtering operation or an integral filtering  
10 operation.